

## Technical Information

### Plate Count Agar

**Product Code: DM 1091A**

**Application:** Plate Count Agar is used for determining plate counts of microorganisms in milk and dairy products by pour plate technique.

#### Composition\*\*

| Ingredients                | Gms / Litre |
|----------------------------|-------------|
| Casein enzymic hydrolysate | 5.000       |
| Yeast extract              | 2.500       |
| Dextrose                   | 1.000       |
| Agar                       | 9.000       |
| Final pH ( at 25°C)        | 7.0±0.2     |

\*\*Formula adjusted, standardized to suit performance parameters

#### Principle & Interpretation

Plate Count Agar is equivalent to the medium recommended by APHA for the isolation of microorganisms in milk and other dairy products <sup>(1)</sup>. Casein enzymic hydrolysate provides amino acids and other complex nitrogenous substances. Yeast extract supplies Vitamin B complex. APHA recommends pour plate technique. The samples are diluted and appropriate dilutions are placed in petri plates. Sterile molten agar is added to these plates and plates are rotated gently to ensure uniform mixing of the sample with agar. Plate Count Agar is also used for the estimation of the number of live heterotrophic bacteria in water.

#### Methodology

Suspend 17.5 grams of powder media in 1000 ml distilled water. Shake well & heat to boiling to dissolve the medium completely. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes.

#### Quality Control

##### Physical Appearance

Cream to yellow coloured homogeneous free flowing powder

##### Gelling

Firm, comparable with 0.9% Agar gel.

##### Colour and Clarity of prepared medium

Light yellow coloured clear to slightly opalescent gel forms in Petriplates.

##### Reaction

Reaction of 1.75% w/v aqueous solution at 25°C. pH : 7.0±0.2

**pH range** 6.80-7.20

##### Cultural Response/Characteristics

DM 1091A: Cultural characteristics after an incubation at 35 - 37°C for 18 - 24 hours.

| Organism                                   | Inoculum (CFU) | Growth    |
|--|----------------|-----------|
| <i>Bacillus subtilis</i> ATCC 6633         | 50-100         | luxuriant |
| <i>Escherichia coli</i> ATCC 25922         | 50-100         | Luxuriant |
| <i>Enterococcus faecalis</i> ATCC 29212    | 50-100         | Luxuriant |
| <i>Lactobacillus acidophilus</i> ATCC 4356 | 50-100         | Luxuriant |
| <i>Lactobacillus casei</i> ATCC 9595       | 50-100         | luxuriant |
| <i>Staphylococcus aureus</i> ATCC 25923    | 50-100         | luxuriant |
| <i>Streptococcus pyogenes</i> ATCC 19615   | 50-100         | Luxuriant |



Dehydrated Culture Media  
Bases / Media Supplements

## Storage and Shelf Life

**Dried Media:** Store below 30°C in tightly closed container and use before expiry date as mentioned on the label.

**Prepared Media:** 2-8<sup>0</sup> in sealable plastic bags for 2-5 days.

## Further Reading

1. American Public Health Association, 1978, Standard Methods for the Examination of Dairy Products, 14th ed., APHA Inc. Washington, D.C.

## Disclaimer :

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